

## ABSTRACT

A method by which a silicon wafer is prevented from increasing boron concentration near the surface and difference in the boron concentration does not arise between the surface of the annealed wafer and the silicon bulk to eliminate boron contamination in the silicon wafer caused by an annealing treatment is provided. The method includes, when annealing a silicon wafer having a surface on which a native oxide film has formed and boron of environmental origin or from chemical treatment prior to annealing has deposited, steps of carrying out temperature heat-up in a mixed gas atmosphere having a mixing ratio of hydrogen gas to inert gas of 5% to 100% so as to remove the boron-containing native oxide film, followed by annealing in an inert gas atmosphere.